

PATENT APPLN. NO. 09/890,646
RESPONSE UNDER 37 C.F.R. §1.111

PATENT
NON-FINAL

IN THE CLAIMS:

1-24. (canceled)

25. (new) An isolated polynucleotide having a nucleotide sequence encoding 2-hydroxyisoflavanone synthase originating from leguminous plants which has an amino acid sequence having 55% or more sequence identity to the sequence shown as SEQ ID NO:2 or an isolated polynucleotide having a nucleotide sequence complementary thereto.

26. (new) An isolated polynucleotide having a nucleotide sequence encoding 2-hydroxyisoflavanone synthase originating from leguminous plants which has an amino acid sequence having 70% or more sequence identity to the sequence shown as SEQ ID NO:2 or an isolated polynucleotide having a nucleotide sequence complementary thereto.

27. (new) An isolated polynucleotide having a nucleotide sequence encoding 2-hydroxyisoflavanone synthase originating from leguminous plants which has an amino acid sequence having 80% or

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more sequence identity to the sequence shown as SEQ ID NO:2 or an isolated polynucleotide having a nucleotide sequence complementary thereto.

28. (new) An isolated polynucleotide having a nucleotide sequence encoding 2-hydroxyisoflavanone synthase originating from leguminous plants which has an amino acid sequence having 90% or more sequence identity to the sequence shown as SEQ ID NO:2 or an isolated polynucleotide having a nucleotide sequence complementary thereto.

29. (new) An isolated polynucleotide having a nucleotide sequence encoding 2-hydroxyisoflavanone synthase originating from leguminous plants which has an amino acid sequence shown as SEQ ID NO:2 or has an amino acid sequence wherein one to 20 amino acids are substituted, deleted, added and/or inserted in the amino acid sequence shown as SEQ-ID-NO:2.

30. (new) An isolated polynucleotide which has 70% or more of sequence identity to the nucleotide sequence of 144-1712 of

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SEQ ID NO:1 and encodes 2-hydroxyisoflavanone synthase originating from leguminous plants and an isolated polynucleotide having a complementary sequence to the nucleotide sequences.

31. (new) An isolated polynucleotide which has 80% or more of sequence identity to the nucleotide sequence of 144-1712 of SEQ ID NO:1 and encodes 2-hydroxyisoflavanone synthase originating from leguminous plants and an isolated polynucleotide having a complementary sequence to the nucleotide sequences.

32. (new) An isolated polynucleotide which has 90% or more of sequence identity to the nucleotide sequence of 144-1712 of SEQ ID NO:1 and encodes 2-hydroxyisoflavanone synthase originating from leguminous plants and an isolated polynucleotide having a complementary sequence to the nucleotide sequences.

33. (New) An isolated polynucleotide that has at least 15 contiguous nucleotides of SEQ ID NO:1.

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34. (New) A polynucleotide according to claim 33, which codes for the amino acid sequence of SEQ ID NO:2.

35. (new) A recombinant DNA comprising a polynucleotide of any one of claims 25 to 34, which is connected to a regulation sequence that will express the polynucleotide in a sense direction.

36. (new) A recombinant DNA comprising a polynucleotide of any one of claims 25 to 34, which is connected to a regulation sequence that will express the polynucleotide in an antisense direction.

37. (new) A host cell transformed with the recombinant DNA according to claim 35.

38. (new) A host cell transformed with the recombinant DNA according to claim 36.

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39. (new) A method for producing 2-hydroxyisoflavanone synthase comprising culturing a host cell that contains a polynucleotide encoding the amino acid sequence of SEQ ID NO:2.

40. (new) A method for producing 2-hydroxyisoflavanone synthase comprising culturing the host cell according to claim 37.

41. (new) The method according to claim 39 further comprising a step of collecting produced 2-hydroxyisoflavanone synthase.

42. (new) The method according to claim 40 further comprising a step of collecting produced 2-hydroxyisoflavanone synthase.

43. (new) A transgenic plant obtained by transforming the plant so that an amount of the product of the enzyme reaction catalyzed by 2-hydroxyisoflavanone synthase or derivatives thereof may be altered or increased by introducing the recombinant DNA according to claim 35 into a plant cell.

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44. (new) A transgenic plant obtained by transforming the plant so that an amount of the product of the enzyme reaction catalyzed by 2-hydroxyisoflavanone synthase or derivatives thereof may be altered by introducing the recombinant DNA according to claim 36 into a plant cell.

45. (new) The transgenic plant according to claim 43, that is a leguminous plant.

46. (new) The transgenic plant according to claim 44, that is a leguminous plant.